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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,794	03/15/2004	Daisuke Kozuka	112780-042	9214
7590 12/15/2008 Everest Intellectual Property Law Group P.O. Box 708 Northbrook, IL 60065				
			EXAMINER RIVELL, JOHN A	
			ART UNIT 3753	PAPER NUMBER
			MAIL DATE 12/15/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/800,794

**Applicant(s)**

KOZUKA ET AL.

**Examiner**

JOHN RIVELL

**Art Unit**

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/7/08 (election & Petition to Revoke).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 9-11, 13, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 4, 8, 12, 14, 16 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Applicant's election without traverse of the specie of Group A, claims 1-18 in the reply filed on January 7, 2008 is acknowledged.

Claims 19-20 are thus withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on January 7, 2008.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. §102 (b) as being anticipated by Ivory et al. (U. S. Pat. No. 4,143,676).

The patent to Ivory et al. discloses, in figures 2 and 3b for example, a "rotary pilot valve comprising: a notch groove (213, 214 of fig. 2; 124 of fig 3a) formed in a peripheral face of a rotary valve (12); a tank port (208), a pump port (207), and an output port (leading to conduit 219) formed in an inner peripheral face of a body (13); a pair of variable throttles (see smooth curve 124 of fig 3b; at 209, 211 of fig. 2) respectively formed on a side of the pump port and a side of the tank port of the notch groove (213); and an operating lever (spindle 5 of fog. 5) for operating the rotary valve by rotation, wherein throttle open areas of the pair of variable throttles are formed in such shapes that the throttle open area of one (209) of the variable throttles gradually increases while the throttle open area of the other (211) gradually reduces according to a rotation angle (counterclockwise) of the rotary valve by the operating lever (5), and

wherein an intermediate throttle pressure between the pump port (207) and the tank port (208) and substantially proportional to the rotation angle of the rotary valve (12) is output from the notch groove (213) to the output port (at 219)" as recited.

Relative to the configuration as at 123 of figure 3a which includes an abrupt change in presented surface to the flow of fluid, the smooth curvature of the surface forming notch 124 of figure 3b, as that surface coincides with the exterior periphery of the spool, forms the "variable throttle" at the opposite ends of the notch.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivory et al. (U. S. Pat. No. 4,143,676) in view of Vickers (U. S. Pat. No. 2,182,459).

The patent to Ivory et al. discloses all the claimed features with the exception of having "a pair of notch grooves... formed in pressure balance positions in a diameter direction of the rotary valve, the pair of notch grooves communicate with each other through a balance hole, the variable throttles are formed at the notch groove for

communicating between the pump [sic pump] port and the tank port, and the intermediate throttle pressure is output from the notch groove to the output port".

The patent to Vickers discloses that it is known in the art to employ "a pair of notch grooves (at pair 8, 10 communicated by bore 12; second pair 9, 11 communicated by bore 13)... formed in pressure balance (i.e. opposite) positions in a diameter direction of (a) rotary valve (spool 4), the pair of notch grooves communicate with each other through a balance hole (12 and 13) for the purpose of balancing radial fluid pressure forces on the spool thus easing actuation of the spool in rotation.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ivony et al. opposed notches connected by a bore for the purpose of balancing radial fluid pressure forces on the spool thus easing actuation of the spool in rotation as recognized by Vickers.

Once employed in Ivony et al., the respective "variable throttles (at notch 124 of Ivony et al.) are formed at the notch groove for communicating between the pump [sic pump] port and the tank port, and the intermediate throttle pressure is output from the notch groove to the output port" as recited.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivony et al. (U. S. Pat. No. 4,143,676) in view of Vickers (U. S. Pat. No. 2,182,459) as applied to claim 2 above, further in view of North (U. S. Pat. No. 2,946,348).

The patent to Ivony et al., as modified by Vickers, discloses all the claimed features with the exception of having "two sets each including the tank port, the output port and the pump port respectively disposed in positions along normal and reverse rotating directions of the rotary valve around the tank port are formed, and the intermediate throttle pressure between the pump port and the tank port in one of the

sets is output to the output port of a same set by normal and reverse rotations of the rotary valve by the operating lever".

The patent to North discloses that it is known in the art to employ "two sets" of porting, each set including a pump  $P_1$ , tank  $P_0$  and output port at  $A_1$ ,  $A_2$  for the purpose of providing balanced, fluid porting to two fluid circuits  $A_1$  and  $A_2$  at the same time.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ivory et al. "two sets" of porting, each set including a pump, tank and output port appropriately spaced about the valve body 13 for the purpose of balanced, fluid porting to two fluid circuits at the same time as recognized by North.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivory et al. (U. S. Pat. No. 4,143,676) in view of Bonney (U. S. Pat. No. 3,774,634).

The patent to Ivory et al. discloses all the claimed features with the exception of having "an automatic return mechanism with which the operating lever is automatically returned to an initial position where tilting starts".

The patent to Bonney discloses, at column 3, lines 60-65 that it is known in the art to employ a spring return mechanism for the purpose of returning a supply and exhaust spool to the "0° position".

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ivory et al. a spring mechanism for the purpose of returning the spool to the "0° position" as recognized by Bonney.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivory et al. (U. S. Pat. No. 4,143,676) in view of Vickers (U. S. Pat. No. 2,182,459) as applied to claim 2 above, further in view of Bonney (U. S. Pat. No. 3,774,634) as applied to claim 5 above.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivony et al. (U. S. Pat. No. 4,143,676) in view of Vickers (U. S. Pat. No. 2,182,459) and North (U. S. Pat. No. 2,946,348) as applied to claim 3 above, further in view of Bonney (U. S. Pat. No. 3,774,634) as applied to claim 5 above.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivony et al. (U. S. Pat. No. 4,143,676) in view of Hayasaka (U. S. Pat. No. 5,301,922).

The patent to Ivony et al. discloses all the claimed features with the exception of having "a detent mechanism with which the operating lever can be retained in a tilted position".

The patent to Hayasaka discloses that it is known in the art to employ a detent mechanism, at spring 102 biased ball element 101 cooperating with recesses 102 (fig. 9) for the purpose of retaining a supply and exhaust rotary spool in a desired position depending on the position of the recesses 103.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ivony et al. a detent mechanism including a spring biased ball element and recesses located on the rotary spool 12 for the purpose of retaining a supply and exhaust rotary spool in a desired position as recognized by Hayasaka.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivony et al. (U. S. Pat. No. 4,143,676) in view of Vickers (U. S. Pat. No. 2,182,459) as applied to claim 2 above, further in view of Hayasaka (U. S. Pat. No. 5,301,922) as applied to claim 9 above.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivony et al. (U. S. Pat. No. 4,143,676) in view of Vickers (U. S. Pat. No. 2,182,459) and North

(U. S. Pat. No. 2,946,348) as applied to claim 3 above, further in view of Hayasaka (U. S. Pat. No. 5,301,922) as applied to claim 9 above.

Claims 13, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivony et al. (U. S. Pat. No. 4,143,676) in view of Vickers (U. S. Pat. No. 2,182,459), North (U. S. Pat. No. 2,946,348) and Bonney (U. S. Pat. No. 3,774,634) as applied to claim 7, above, further in view of Hayasaka (U. S. Pat. No. 5,301,922) as applied to claim 9 above.

Regarding claim 15, in Ivony et al., "the body (at 13) includes a structure for airtightly housing the rotary valve (12)" as recited.

Regarding claim 17, in Ivony et al., "the rotary valve (12) is a cylindrical valve" as recited.

Claims 4, 8, 12, 14 16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571)272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/John Rivell/  
John Rivell  
Primary Examiner  
Art Unit 3753**